

ABSTRACT OF THE DISCLOSURE

The radial/rotary propulsion system of the present invention features a flywheel having concentric rings of permanent magnets attached to one or both sides. These permanent magnets interact with DC powered electromagnets which, when selectively energized, impart rotary motion to the flywheel. By arranging the permanent magnets in concentric rings, better control of both speed and torques may be obtained. In addition, in a regenerative mode, inertia of the flywheel is reconverted to electrical energy by either additional permanent magnet/coil combinations or through the switching of the electromagnet coils normally used for rotating the flywheel. In alternated embodiments, regeneration is accomplished with alternators interacting with other magnets of the flywheel. The regenerative mode is also helpful in braking the flywheel as its inertial energy is converted to electrical energy. The energy recapture feature is particularly useful when the flywheel is utilized in a self-propelled vehicle powered by self-contained batteries.